POTTERY OVENWARE AS AN ART FORM

A Creative Project

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Master of Fine Arts

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by

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TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Clay vessels that were utilized almost two thousand years before Christ have been found in many graves, burial mounds, and ruins of ancient cities. These pots were identified by geologists to have been used for cooking purposes. The geologists found that the blackness on their outside surfaces was not of age but carbon and soot from the fires over which the people cooked. Ever since these early times man has been developing new styles and sizes of pots to be used for cooking.

Today a commercial pottery company has come forth with a cooking utensil that may be taken from the freezer and placed into the hot oven or used over a direct flame, with no reaction to the pot. These pots have a decoration on the side and a removable handle which would burn if left on the pot while in the oven. The potter feels that these articles and other similar pieces of pottery are lacking not only in some functional purposes but also in design as a work of art. This problem was examined by the potter and Richard Fairbanks, pottery instructor at Drake University. They found that the problem consisted not only of designing a certain type of ovenware as an art form but also of developing the clay and glaze so the finished product would

withstand varying degrees of heat treatment while being utilized.

The potter and his instructor also discussed the problem of using earthenware or stoneware clay for the project and decided that stoneware clay would be more versatile. Stoneware cooking pots were used during the Early Silla (Corean) Period. This period was about the year 57 B.C. These pots were an ash-gray and sometimes had an accidental kiln-gloss but were usually unglazed. The kiln-gloss was due to the high firing and vitrification of the stoneware and to deposits of flying wood ash. It was no doubt appealing to the eye and quite different from the unglazed pieces. These early pots were high footed and had covers. The high feet had pierced sides which were used to insert kindling for the fires that were built under the cooking part of the pot.[1] The only decoration on the pots were scratched lines.

The Greeks had a high footed cooking pot which was used in the same way and at about the same time as the Corean's. However, the Greek pots had several large, square handles projecting upward from the lip. These handles have carvings in them which were believed to be used to ward off

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[1] W. B. Honey, Corean Pottery (New York: D. Van Nostrand Company, Inc., 1948), pp. 1, 4.

evil spirits that might influence the substance that was being cooked in the vessel. The Greek pots were made of a coarse, red, earthenware, brick-like clay rather than a stoneware clay and therefore were not as durable.[1] Early Roman cooking vessels were found to have only one handle and the only decoration on these pots was on the handle.

In America, cooking pots have been found that date back to 700 A.D. Most of these have been from Mexico and the American Southwest. On these pots the clay rings of which the necks were made were allowed to show. Later their cooking pots had a corrugated surface on the outside which was from the constructional coils. These corrugations were sometimes pressed in to make a geometric design. After the Great Pueblo Period the Indians used plain cooking pots. An asymmetrical pot was made which they called a duck pot or a shoe pot. These pots were found having one side that was protruding, rather flat, and without handles. The protruding part was the portion that was placed over the fire. The Mexicans never painted their cooking vessels for the smoke of the fire blackened the paintings and the colors.[2] Today

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[1]H. B. Walters, History of Ancient Pottery, Vol. 1 (London: John Murry, Albemorle Street, W., 1905), p. 105.

[2]Helen E. Stile, Pottery of the American Indians (New York: E. P. Dulton and Company, Inc., 1939), p. 65.

near San Antonio, Texas, the Mexican Indians are still making great quantities of cooking pots. If people were to go today to their homes, they would find them using clay pots and pans for boiling, roasting, baking, and frying. This type of pottery is termed ovenware in the gift shops of the United States.[1] Almost any size or shape may be found in the Mexican market place and the wares are natural clay color with brown, blue, black, green, and cream decoration touches with a high glaze. Much of their ovenware is a red, earthenware clay decorated with a cream color and touches of green. Also many of their ovenware pieces are only partially glazed. Usually all of the inside and only part of the outside is glazed.

Before the thirteenth century a large portion of the cooking pots were left unglazed. Later the people found that it was best to glaze at least a part of the bowl, usually the inside, because it not only counteracted the porosity, but it was easier to keep clean. The glaze used was a thin lead glaze which served the purpose mentioned above and was also attractive to the eye.

During the thirteenth century and later the English developed cooking pots that had round bases, convex sides,

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[1] Ibid., p. 147.

and a slight contraction below the flaring lip. The "pipkin" was a type of cooking vessel that derived from metal work. It had three feet and a single handle. The handles were straight and hollow and were intended for a piece of wood to be insereted when the vessel was ready to be removed from the heat.[1] Handles were added for attractiveness as well as for utilitarian purposes. Once again the author finds that the English during the thirteenth century were still glazing only the inside of the pots, but during the early fourteenth century they began to glaze the outside. The glaze on the outside consisted of just a splash of the glaze. Later, during this period, a buff-colored earthenware clay was introduced which could be fired to a higher temperature. This would enable the clay to withstand a higher degree of thermal shock yet not as high as a stoneware clay could withstand.

During the fifteenth century the English made a chafing dish which was called a fuming pot or stove.[2] They were made of coarse red clay and most of them had lids. The body of the pot had two horizontal loop handles and were urn-shaped.

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[1]Bernard Rackham, Medieval English Pottery (New York: D. Van Nostrand Company, Inc., 1949), p. 16.

[2]Fred W. Burgess, Old Pottery and Porcelain (New York: G. P. Putnam's Sons, Ltd., 1924), p. 63.

The bowl was ornamented with incised lines and a yellow glaze.

At the beginning of the sixteenth century the author found that pottery in Europe was continuing along the same trail as it had earlier. However, in the Far East there was a different story, because the people of the Orient had begun to develop porcelain. These people were many years ahead of the Europeans in ceramic technology so the potter will rejoin the English potters of the seventeenth century. At this time the people were producing a type of ware called English slip-ware. Once again the cooking vessels had high feet with a slit in the side of the foot to receive the heating material. These pots also had several handles on them and were decorated with a yellow slip which would harmonize with the clay. The English slip-ware showed a superiority of finish.[1] Pottery served the English people until porcelain was introduced in the middle of the eighteenth century. However, this porcelain did not affect the production of pottery cooking vessels in Europe because the high cost and fragility of porcelain restricted its use. The ordinary man, therefore, continued to produce pottery cooking pots mainly from stoneware material. He kept the forms smooth and free of many handles and frilly decorations. He

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[1] Ibid., p. 57.

also used a simple glaze that would enhance the clay.[1]

In the late eighteenth century and throughout the nineteenth century, the factory took over the practice of pottery making which enabled man to produce utilitarian products much cheaper than man could make them by hand. As Daniel Rhodes states, "The old craft of pottery, practiced more or less anonymously for millenniums, expired as a result of industrialization."[2] However, pottery as a craft is now beginning to reappear, and man is not only considering the money-making and money saving aspects of pottery but also at their personalized qualities. This personal view comes from knowing that a human potter, not a machine, has produced the pot and glaze himself and is completely satisfied with his piece of work. Keeping the personal view in mind, and wishing to learn more about cooking vessels through extensive research, the potter chose to put this research to work by producing a type of "Pottery Ovenware As An Art Form".

During the fall semester of 1960, one of the potter's classmates produced a stoneware candle holder which had a pierced cover to let the flickering light through when the lid was placed over the burning candle. While testing the article the lid cracked due to the high expansion coefficient

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[1]Daniel Rhodes, Stoneware & Porcelain The Art of High-Fired Pottery (New York: Chilton Company, 1959), p. 33.

[2]Ibid., p. 36.

of the clay materials. This had been another incentive to the potter, for now he could take the same type of clay and perhaps through research and testing produce a clay body that would not crack under extreme temperature changes.

CHAPTER II

THE PROBLEM OF DESIGN, DECORATING, AND GLAZING

Through research into the history of pottery the potter found that the cooking vessels differed in many ways. First of all, they varied in size and shape. Some had high feet, and some had no feet. There were pots with many handles so they could be conveniently passed around, and some of the pots had only one handle. The decorations on the cooking pots were of different materials and also applied in many places on the pots. This research was stimulating for the potter, because he had to design the ovenware so it would be appealing to the eye and could be conveniently removed from the hot oven to the table.

I. THE PROBLEM OF DESIGN

The basic shape of the ovenware would be round for it would be thrown on the pottery wheel. If the handle of the piece would be removed and the wedge not trimmed from the foot, the pot in itself would be a simple cylindrical bowl. The handle would be thrown on the pot as the pot is being formed and the foot would be trimmed. Trimming the foot at an angle would give the pot sharpness which would emphasize the design. It would also give the article the

appearance of sitting upon the table and not seem to grow from or be sunken into the table. The bottom of the pot would also be trimmed with the edge at an angle so the foot would be a narrow rim which would cool faster when removed from the heat. This type of a design for the foot of pots is used quite often by the potter so it did not present as much of a problem as the handle.

History shows that the handles were not only used for utilitarian purposes but as part of the decoration and design of the pot. Commercial ovenware was examined by the potter and the handles on many of the cooking pots were the type mentioned in Chapter One.[1] Also many were found to have one or two handles. The commercial handles did not satisfy the potter, so experimenting was begun to determine the type of handle to use. The potter came to the conclusion that one continuous rim around the pot would not only carry out the simplicity of the design, but would be convenient to use. The problem of searching for a single perfect handle protruding from the body of the pot would be avoided and there would be less danger of breaking the handle. With this type of handle there would also be little danger of being burned while placing or removing the pot

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[1]Chapter One, p. 1.

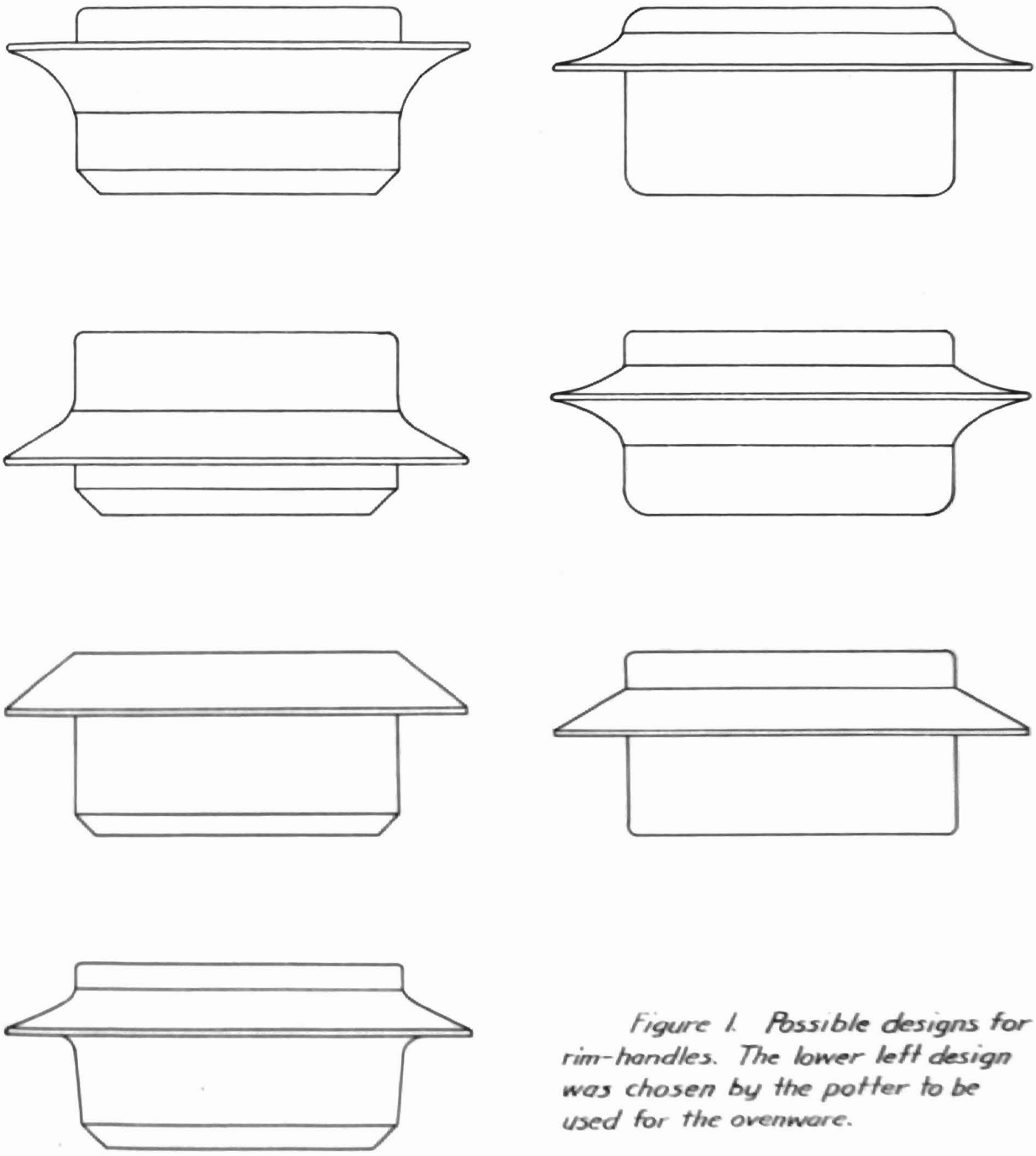

Figure 1. Possible designs for rim-handles. The lower left design was chosen by the potter to be used for the ovenware.

from the heat. The rim would protrude approximately one-quarter of an inch below the lip of the pot and extend outward about one inch from the wall. This would be sufficient height from the table top and a convenient width for the handle to be held securely. The continuous handle would also be convenient for decoration if ornament were desired.

The lid to the ovenware would serve a dual purpose as do many of the lids on casseroles today. However, these lids will be used as serving plates for other foods than what is cooked in the casseroles, if desired by the homemaker, rather than being used as hot pads.

The handle or knob on the lid presented a problem, because if the lids were to be used as a plate or serving dish the knob would have to be the proper size and shape to hold the lid and to fit the overall design. Round, ball knobs were discarded and tall and narrow knobs had to be withdrawn for this type would be impractical. The potter chose a knob for his ovenware that would carry out the sharp angle of the foot and be just high and wide enough to give good support to the lid when used as a serving plate.

The ovenware pieces that would have lids have a flange on the inner lip of the bowl to hold the lid in place while covering the bowl. This had to be considered in the design, because if the lid had the flange on it to hold it

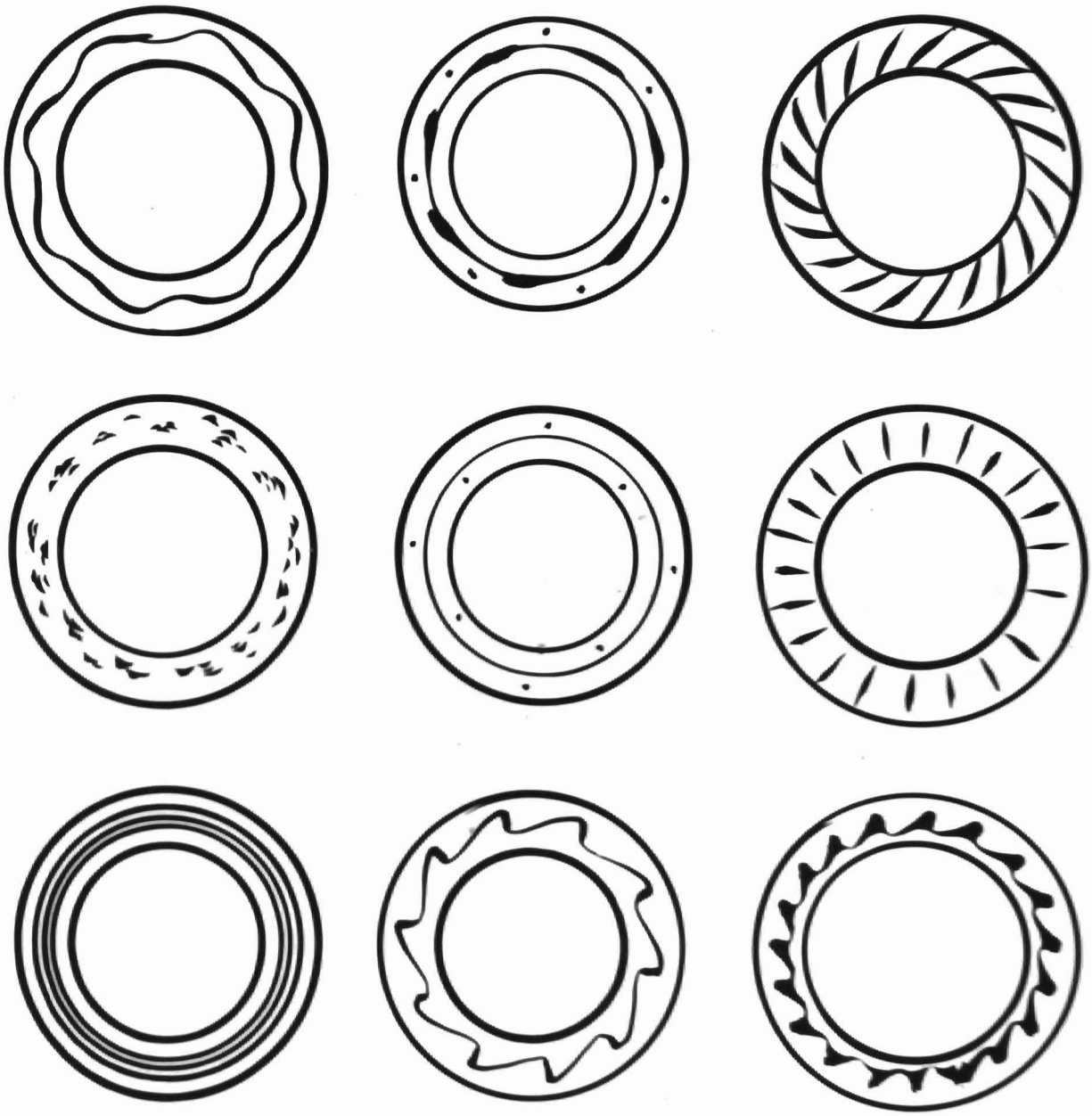

Figure 2. Possible engobe decorations for rim-handle of the ovenware.

Figure 3. Ovenware lids used as serving plates.

in place, it would take the appearance of a lid when used as a serving piece. With the flange on the bowl, to hold the lid in place, the lid when used as a serving piece would not appear to be a lid but a plate on a high foot. The smaller individual pieces were designed without lids and have no flange. Individual casseroles are usually removed from the heat and placed on the table at once.

The ovenware was designed by the potter to be used at almost any occasion. The colors chosen, as mentioned in the next section, would harmonize with any table setting except the most formal. The question about using this type of pottery ovenware with the most expensive china was considered of minor importance since, today, due to the increasing tempo and lack of servants, more and more people are serving their dinner guests buffet-style rather than at the table. The ovenware will enhance the buffet whether it is in the dining room or the kitchen, because the clay and form have simple and natural beauty that speak for themselves. The ovenware will not only enhance one's best china or everyday dishes but will also be welcomed and harmonize with many of today's barbecue outings on the family patio.

When one speaks of ovenware, the immediate thought that comes to mind is that of a dish which can be used in the oven for cooking purposes. There are many recipes that call for the use of ovenware in preparing a main dish for a

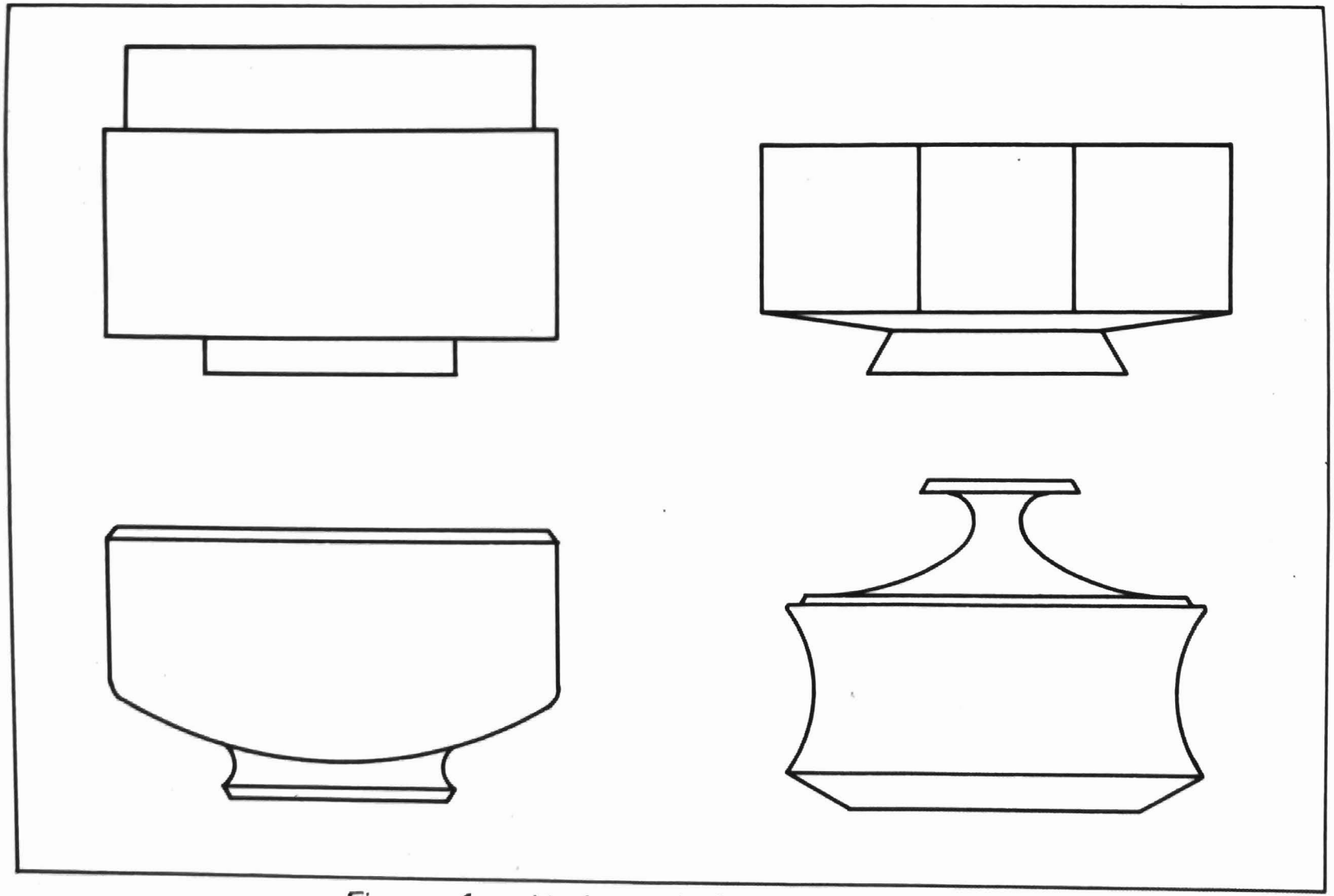

Figure 4. Various designs for casseroles

had used an overall slip decoration.[1] The potter did not feel that the overall slip decoration would enhance his ovenware or that a spotty, flowery decoration would be appropriate. Some type of slip decoration would, however, add sparkle and a touch of color to the buff-colored ovenware.

A discussion was held by the potter and his instructor as to the type of decoration to use on the rim-handle. During this discussion the problem of having an engobe decoration or cutting away parts of the handle became apparent. If parts of the rim-handle were cut away, the pot would not be as durable and would be weakened. This the potter found to be unsatisfactory because if the pieces were bumped or dropped they would no doubt break. Also, the design and decoration would be more adaptable to use with other table ware if they were kept simple.

If colors were to be used as decoration, there would be little difficulty in choosing them for the colors must harmonize with the clay and the foods. The potter chose two colors to use, a light yellow and white. These two neutral colors would harmonize with any table service with which they would be used. The overall design of the

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[1]Fred W. Burgess, Old Pottery and Porcelain (New York: G. P. Putnam's Sons, Ltd., 1924), p. 64.

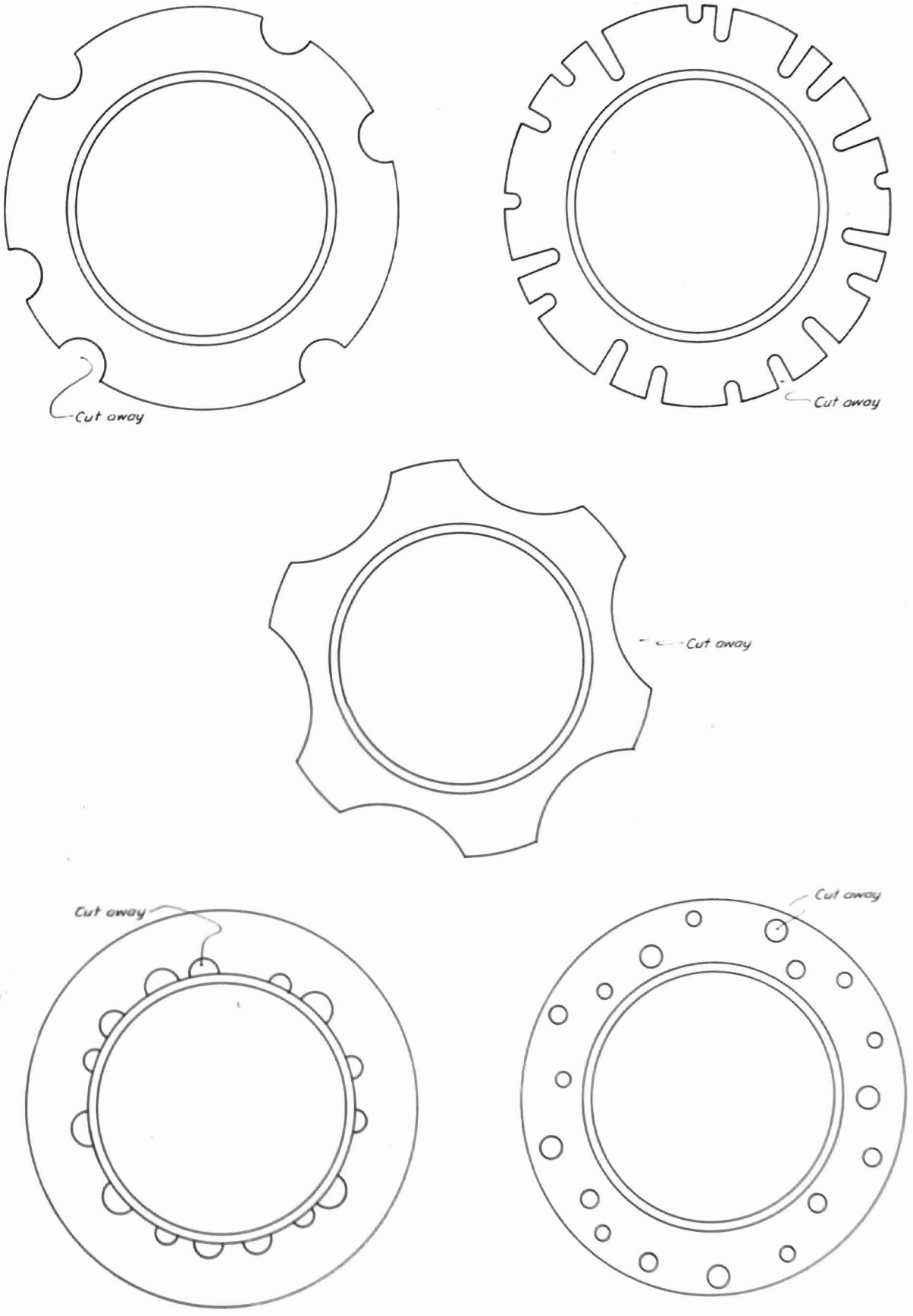

Figure 5. Possible cut away decorations for rim-handles of ovenware.

ovenware is strong enough so that too much color would make the pot appear heavy and ornate. A photostat of possible decorations may be seen on page 13.

Another important part of the ovenware is that of a glaze. The potter chose to glaze his wares as men have been doing for many centuries, which was to glaze all of the inside and part of the outside of the pots. This would make the ovenware easy to keep clean on the inside as well as on the top of the rim-handle where food might be dropped. The outside glaze would be applied just over the outer edge of the rim-handle. The glaze would be clear and would be one of the potter's own formulas. The clear glaze would let the color decorations show and would also give a different texture than the part of the pot that is unglazed. The inside of the lids would be glazed, because if they were used as the potter has intended, they would also be easier to keep clean. The glaze formula that would be used will be found on the following page.

Empirical Formula of Glaze
used on finished ovenware.

c/05 — Glaze Symbol 200

Formula

	$RO(R_2O)$	R_2O_3	RO_2
	KNaO .20 CaO .25 PbO .55	Al_2O_3 .25	SiO_2 1.60

Calculation	KNaO	CaO	PbO	Al_2O_3	SiO_2
Keystone Feldspar .20	.20	.25	.55	.25	1.60
	.20	—	—	.20	1.20
Whiting .25	X	.25	.55	.05	.40
	—	.25	—	—	—
White Lead .55	X	X	.55	.05	.40
	—	—	.55	—	—
Kaolin .05	X	X	X	.05	.40
	—	—	—	.05	.10
Flint .30	X	X	X	X	.30
	—	—	—	—	.30

Batch	Mol. eq.	x	Eq. Wts.	=	Batch Wt.
Feldspar	.20		550		110.0
Whiting	.25		100		25.0
White Lead	.55		258		142.0
Kaolin	.05		258		12.9
Flint	.30		60		18.

Total Weight 308.9 Grams

Figure 6.

CHAPTER III

MATERIALS AND EQUIPMENT USED

I. MATERIALS USED

Pottery ovenware refers to a clay cooking vessel which can be utilized in an oven. The clay body and the glaze of the ovenware must be able to withstand varying degrees of treatment so they would be serviceable for many years.

The potter planned to use the clay which is furnished by Drake University. It was a stoneware clay purchased from the Zanesville Stoneware Company at Zanesville, Ohio. This clay body had been used by the potter during the fall semester of 1960 and was very plastic and workable as well as firing to the desired color for his chosen project. The only undesirable feature of the clay was that it was high in shrinkage. This clay would be tested and altered with additions of inorganic matter to determine its shrinkage, thermal expansion, durability, and porosity. For testing of the clay see Chapter Four.

Many of the clay bodies used by commercial potters today, for ovenware pieces, are glazed with an opaque glaze. Therefore, the clay body is not visible and this was considered undesirable by the potter. The clay body should add

to the beauty of the ovenware. Another clay body that was available at Drake University was an earthenware clay that became a brick red when fired. This clay would not serve the potter as well as the Zanesville clay.

The materials that were added to the clay to satisfy the potter were grog and talc. These materials were added to strengthen and aid the clay as mentioned in the next chapter.

The material chosen by the potter to be used for the decoration of the ovenware was a white engobe slip which is a clay in liquid suspension with colorants added. All of the glaze materials used by the potter are shown on the glaze formula chart on page 21.

II. EQUIPMENT USED

The clay was mixed in a thirty gallon can and after being blunged was poured out to dry until workable in plaster bats. When the clay was in the workable state, it was then wedged on a wedging board and made ready to throw. All of the pots were thrown and trimmed on a Klopfenstein kick wheel. The decorations were also applied while the pots were on the wheel. All of the materials used in the makeup of the glazes were weighed on the Ohaus gram scale. The kilns that were used for firing and testing of the ovenware were the electric Paragon kiln for cone 7

and the electric Cress kiln for the cone 05 tests. All of the finished ovenware was fired in the Cress kiln. The major equipment that was used is shown in the photographs on the following pages.

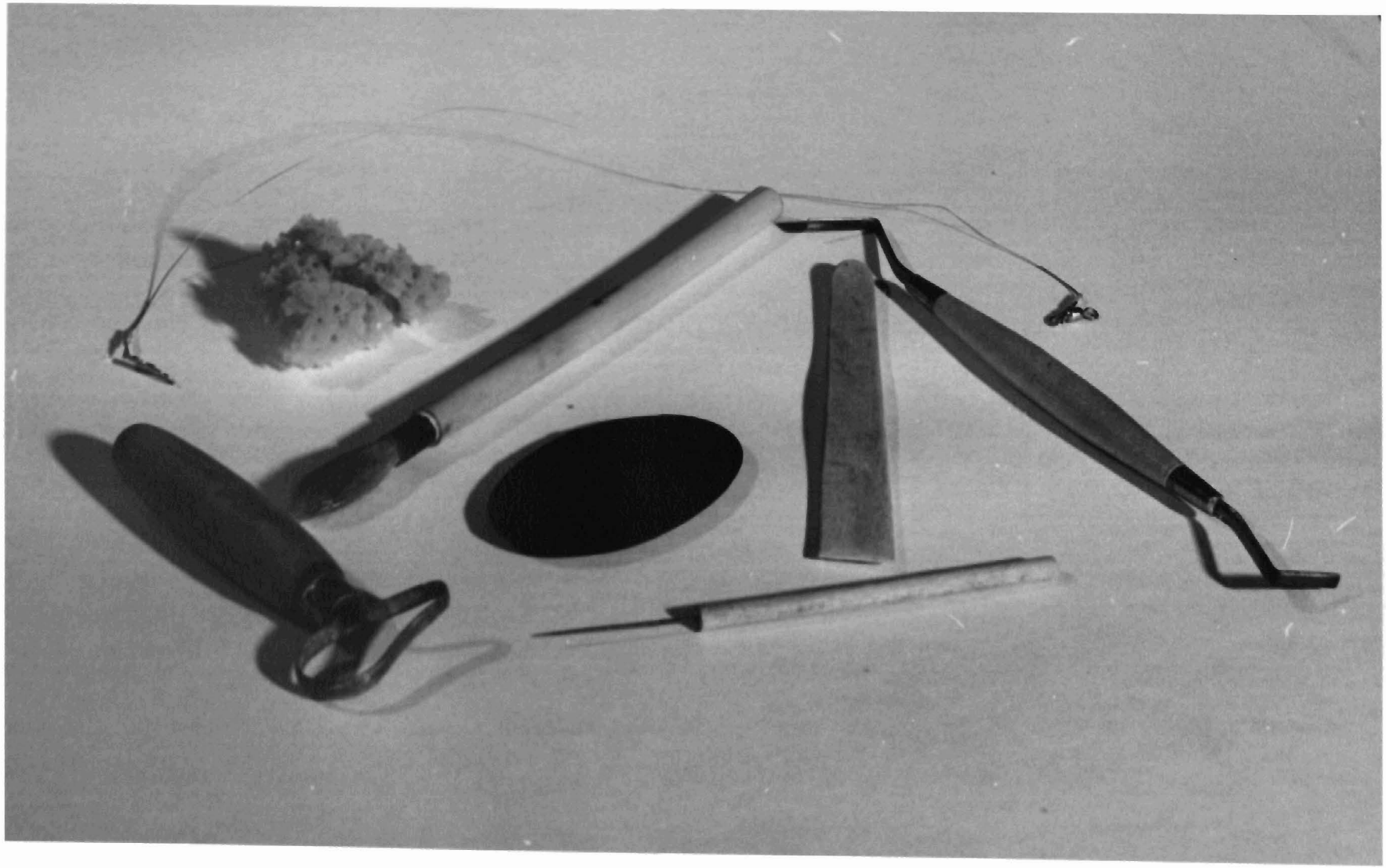

Figure 7. Pottery tools used for project.

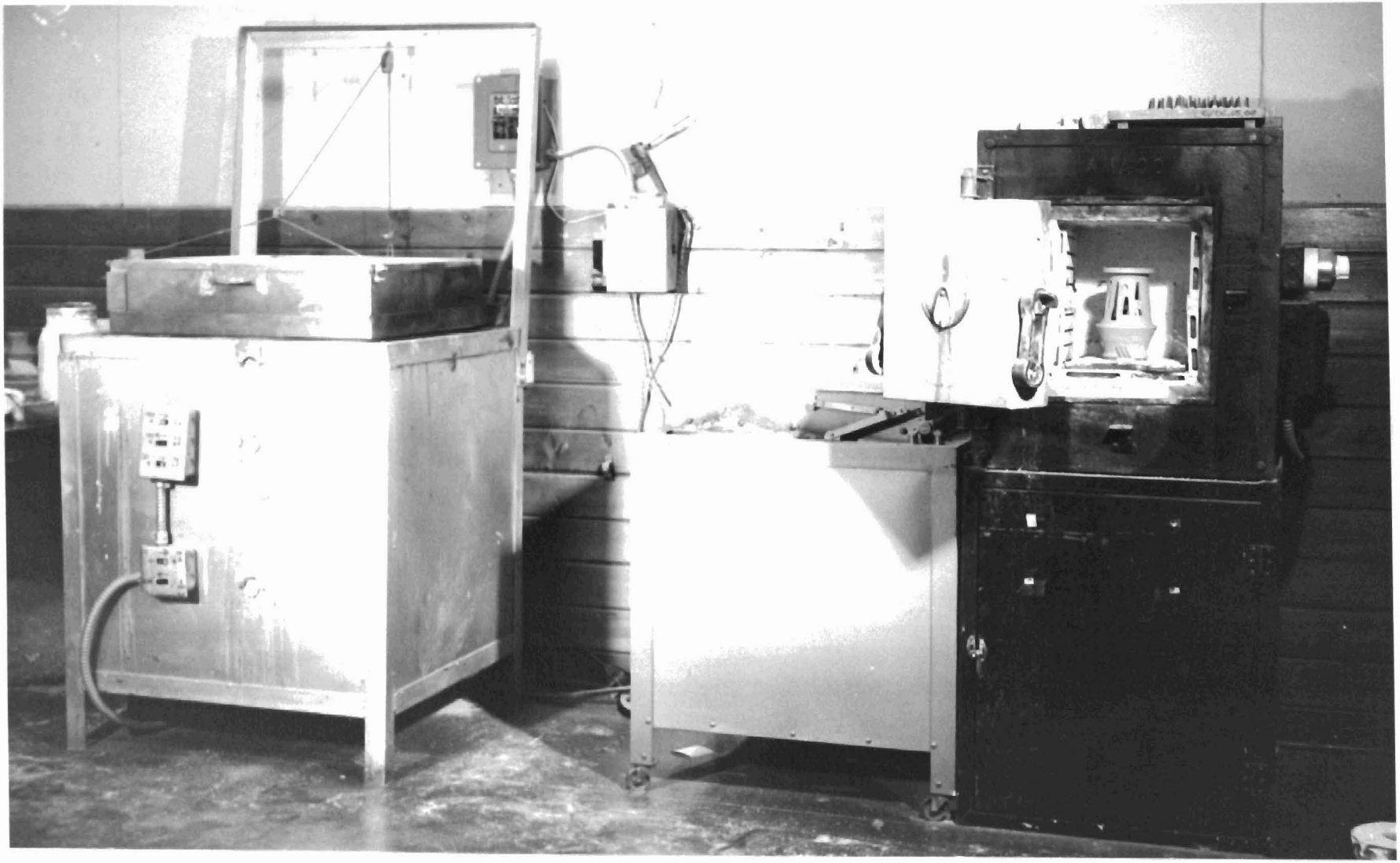

Figure 8. Kilns used for project.

Figure 9. Kick wheels used for project.

Figure 10. Compounding the glaze materials.

CHAPTER IV

TESTING THE CLAY BODY AND THE GLAZE

The Zanesville, Ohio, stoneware clay was used by the potter. This clay was very plastic and workable; as was further proved by the tests made of the clay to determine its shrinkage, its resistance to thermal shock, porosity, and durability.

There are many ways that shrinkage can be controlled in a clay body. Fluxes such as feldspar or cornish stone may be added to bind the material together while firing.[1] These substances contract slightly or not at all and do not combine with water to form a plastic mass as clay when water is added. Another material that would help to prevent shrinkage is grog. Grog is a refractory clay that has been ground and then fired. The more grog added to the clay the less shrinkage there will be but the porosity will be greater.[2] This presented a problem because the potter wanted a clay body that would not contract but did not want a porous clay body. A porous clay body would not be good because if it were not entirely glazed the ovenware would absorb too much moisture.

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[1] Alfred B. Searle, The Clayworker's Hand-Book (London: Charles Griffin and Company, Limited, 1953), p. 4.

[2] Ibid., p. 11.

Through research the potter found that talc was an inexpensive source of magnesium which acts as a flux. Therefore, as feldspar, it would aid in controlling the shrinkage. Talc was also found to impart to the clay body high resistance to thermal shock and a high resistance to acid.[1] Another advantage for using talc is that it will decrease the moisture expansion of a porous body which will be discussed later in this chapter.

"A high shrinkage usually indicates a strong, dense body, which, however, may be ruptured with cracking."[2] A small shrinkage will indicate that there is present a large quantity of non-plastic, non-shrinking material such as sand and grog. Grog when added to a clay for the prevention of shrinkage should be fairly large in particle size. However, this as stated will increase the porosity, but with the addition of talc, which will help control porosity and also shrinkage, grog was added in a smaller particle size.

The Ohio clay was weighed in a powder form and placed in receptacles marked according to the percentage of talc which was used. Then the talc was measured in appropriate

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[1] The Editors, "Talc", Ceramic Industry, February, 1939, pp. 38-40.

[2] Hewitt Wilson, Ceramics-Clay Technology (New York: McGraw-Hill Book Company, Inc., 1927), p. 175.

amounts and added dry to the clay. Each receptacle containing the talc and clay was agitated to mix the two compounds together. Next a commercial grog was sifted through a number 40 mesh screen to remove all of the particles that were larger than the 40 mesh. Then the grog was sifted through an 80 mesh screen to remove any dust and small fine particles. This was done so the grog would be consistent in size for the five test clays. The grog was then weighed in the proportion of ten per cent to the total weight of each dry mixture of clay and talc and then added to the dry compound.[1] Next an equal volume of tap water was placed in a container appropriately marked and the dry mixture was then slaked into the water. These were left to set for two days. After the first day the mixture was blunged, and the second day the water syphoned off and the mixtures were batted. After setting for twenty-four hours in the bats the clay was then ready for wedging and throwing.

Each test batch was then wedged separately and a strip rolled out from each test and cut to size for the contraction test scales. Then three small individual casseroles of their appropriate design were thrown from each

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[1] Daniel Rhodes, Stoneware & Porcelain the Art of High-Fired Pottery (New York: Chilton Company-Book Division, 1959), p. 50.

of the five test batches of clay. These were left overnight to become leather-hard and were trimmed the next day, decorated with slip and then bisque fired.

When the pots came from the kiln, they were weighed and grouped in sets of five according to near equal weights. The five pots in group one were then glazed with the formula number △3 12 and then fired to cone 7. The five pots in group two were given the absorbtion test and group three pots were glazed with the formula number 200.

Group number one was a test to see if this particular clay body would be affected by a high firing and also to see how well the high-fire glaze would fit the clay body. On the clay body that contained no talc, the glaze showed no reaction and fitted the body very well. As the talc was increased, the glaze became affected by the talc at the high temperature. On test pot E, which contained 40 per cent talc, the clay and glaze blistered. Through this test the potter found that the clay body and the glaze, when fired to a high temperature, would not serve the purpose, for the ovenware, desired by the potter.

The second group of pots were weighed when completely dry and then soaked in water for twenty-four hours. At the end of this period of time they were removed from the water and wiped dry. Then they were weighed again. The difference

in their dry and wet weight was then divided by their dry weight and this answer was then multiplied by one hundred to determine the percentage of moisture they had absorbed. Test A which contained no talc had a moisture content of 7.88 per cent and test E which had the most talc had a .35 per cent content of moisture. The other tests varied according to the talc content. The group three pots which had the low fire glaze on them turned out very well.

Another problem must be considered before proceding with testing the simple pots and that is the shrinkage test. The five, twelve inch test strips were fired the first time to cone 05. There was a considerable amount of shrinkage in all five pieces however; test D showed the least, which was eleven and one-quarter inches. Once again the test strips were fired but this time to cone 7. In this test there was a great difference in shrinkage, but test D shrunk the least again. At this point test D has proven to be the best so a contraction scale was made of test D which may be seen on page 35.

The set of five pots that were used for the absorption test were glazed with the number 200 glaze; however, the colorant, rutile, was added by different percentages for each pot and fired to cone 05. This was done to see if the

DIRECTIONS FOR MAKING AND USING A CONTRACTION SCALE

A Contraction Scale is very useful, and avoids troublesome calculations when making articles of definite sizes when burned. A separate scale is required for each clay or mixture having a different contraction. To construct such a scale, a large sheet of white paper is placed on a smooth surface and two lines at any convenient angle are drawn on it. One line is marked off in inches, its total length being exactly equal to that length of the fired piece of clay which was just 36 inches in the pasty or moulding state, this length being calculated from a series of trial pieces or the known contraction of the clay or body. The length of the other line is made exactly 36 inches. The ends of the two lines are joined by drawing a third line, thus forming a triangle. Lines parallel to this third line are then drawn through each inch division across the triangle, and finally the divisions of the second side of the triangle are numbered to correspond to the first side. The newly numbered divisions are those of the contraction scale. They may most conveniently be used by laying a strip of smooth wood or aluminum (other metals may stain the clay) with one truly straight edge along side the contraction scale and marking off the divisions on the straight edge by means of a needle or fine scriber and numbering them appropriately. If this wooden or metal scale is then used for measuring a clay or body, articles made to such measurements will have the desired shrinkage. Thus, if a scale were made for a clay having a shrinkage of 1 inch per foot, each of the divisions on the second side of the diagram and on the wooden or metal scale would be 1-1/11 inches, and a block of clay pastell divisions (1 foot) in length would, after firing, be exactly 11 inches long. The contraction scale should be clearly marked on it, so that there may be no doubt as to the shrinkage for which it has been prepared.[1]

A contraction scale for test D will be found on the following page. The potter used 12 inch strips rather than 36 inch strips for his tests.

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[1]Alfred B. Searle, The Clayworker's Hand-Book (London: Charles Griffin and Company, Limited, 1953), pp. 246-47.

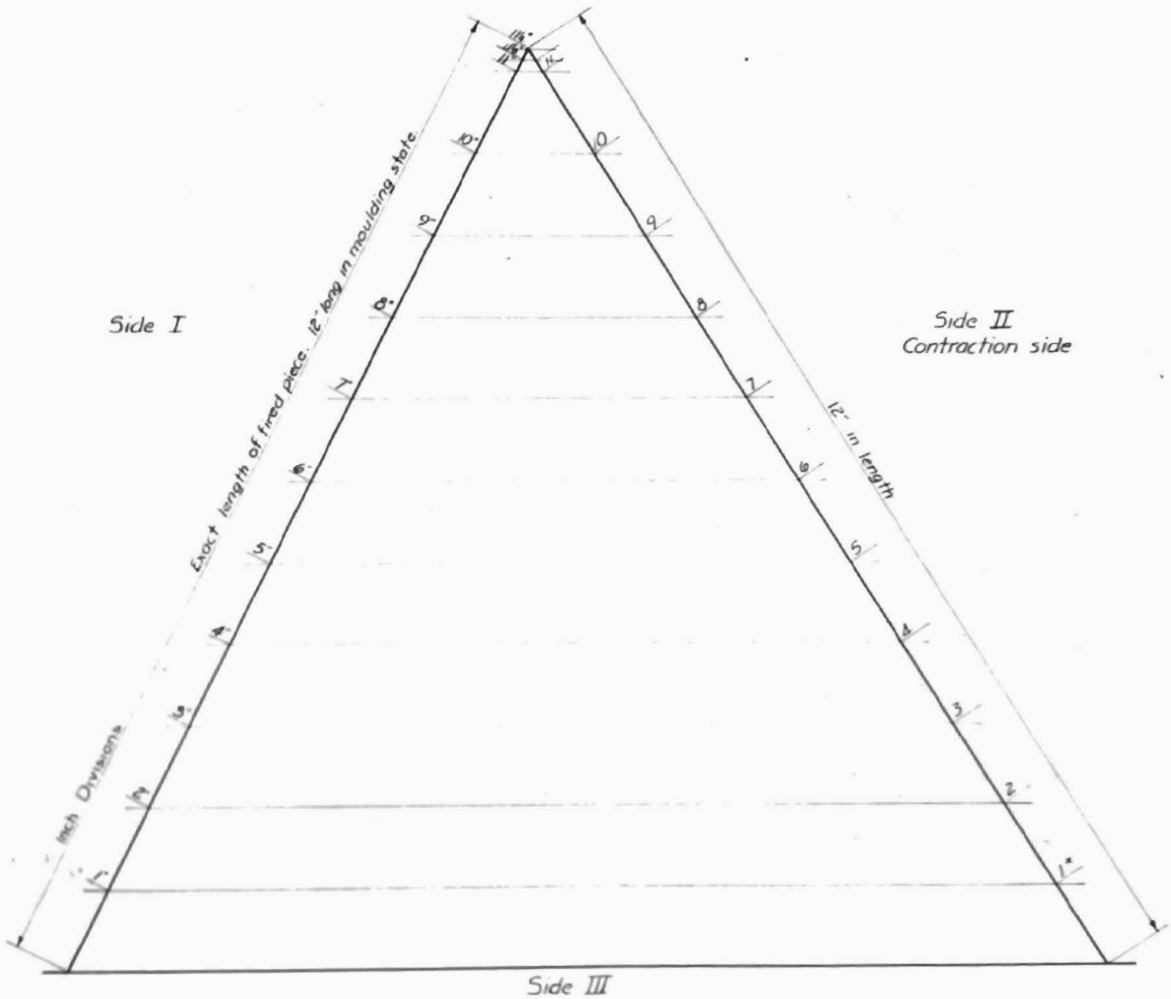

Figure 11. Contruction scale for test strip D. Directions for making and using this scale will be found on the preceding page.

gloss glaze could be matted slightly to present a more pleasing glaze for the ovenware. The clear gloss glaze was found to be the most pleasant of all so was used on the finished ovenware.

The set of five pots in group three were put through the thermal shock resistance test. This test consisted of a series of immersions from boiling water to ice water and back to boiling water. Each pot was left in the boiling water at 212° Fahrenheit for ten minutes and then placed in the ice water at 32° Fahrenheit for ten minutes and repeated several times to determine the amount of shock they could stand.[1] All five of the pots stood the shock treatment. Therefore any of them would be suitable for the ovenware if they were subjected to a temperature not higher than 212° F. The next step was to test the pots against shock in a different manner. The test pots were placed in an electric oven heated to 300° F. At this time the pots were at the temperature of 40° F. After the pots were placed in the oven, the oven thermostat was turned to 400° F. This was done to establish a maximum temperature at which food would be cooked in in the ovenware. The pots were taken out of

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[1]Rexford Newcomb Jr., Ceramic Whitewares History, Technology and Application (New York: Pitman Publishing Corporation, 1947), pp. 162-63.

the oven thirty minutes later and placed in ice water at the temperature of 22° F. Test pot A, which had no talc in it crazed quite badly but as the talc increased the crazing decreased. Tests D and E showed little affects.

Another test was made on the same pots and this time the pots were placed over direct flame. Each pot was left over the flame for ten minutes and then removed but was not given a shock test. All of the pots cracked to some extent. Test pot A, which had no talc, had only one crack, whereas the foot of test pot E broke off and this pot contained the most talc. A photograph of the cracks in the test pots may be seen on the following page.

The potter chose to use the glaze and claybody that was used on test pot D because this pot survived all of the tests better than any of the other pots with the exception of the open flame test. The ovenware was not intended to be used over an open flame.

Figure 12. Cracked and broken test pots.

CHAPTER V

CONCLUSION

The research that was carried on by the potter in order to give an historical perspective to the ovenware problem, the design and decoration development, and the testing of the ovenware led to the following conclusions. Some of the historic cooking vessels were simple in design, and some were grotesque. The pots that were designed with simplicity in mind were more appealing to the potter. Therefore, he chose to develop his ovenware to be simple in design, attractive, and useful. Many of the historic pots had odd appendages and handles that could easily be broken off, and these convinced the potter that a rim-handle would be best. The continuous rim-handle proved to be very successful not only as part of the design and decoration but as an aid in placing or removing the pot from the oven. The lids of the past were used mainly as a cover of the vessel or as a hot pad. A lid with a dual purpose, as the potter has intended his lids to be, proved to be gratifying. The lid that sits on a rim inside the casserole would not allow condensation to run over the edge of the pot while being used.

The white engobe proved to be more decorative on the

ovenware than the yellow. The yellow engobe when fired was almost the same hue as the clay so the white engobe was chosen for the final pieces.

The selection of the earthenware glaze for the ovenware was satisfactory. A clear glaze was desirable to allow the buff-colored clay and the engobe decoration to show through. The glaze was resistant to various treatments, and it also fitted the clay body. Extreme tests were given to the pots which caused the glaze to craze but with normal use the glaze proved to be satisfactory.

There are very few limitations in the designing or forming process of the ovenware. However, one limitation would exist if the potter would choose a different clay body for the ovenware. If a different clay body were used, the process of testing the clay and the glaze would have to be thoroughly carried out as the potter has done with the Zanesville stoneware clay. Also, the use of different kilns, because of their atmospheric conditions, would limit the potter in reproducing the same type of ovenware. The test pots were placed over an open flame which proved to be unsatisfactory and another limitation because all of the clay bodies cracked. Perhaps this problem could be remedied at a future date through more research and testing. However, the pots survived the hot oven test and this was gratifying

because they were only intended for oven use.

The testing of the clay body and glazes enabled the potter to acquire a further understanding of the possibilities of the materials he used. The clay body had to be remedied in order to withstand the tests to which the ovenware would be subjected in everyday use. The glaze also had to be tested to fit the clay body and be suitable as a covering to resist liquids and foods.

In throwing the ovenware pieces on the wheel, the potter learned that the best way to repeat similar sized pots was to throw all of the bowls first and all the lids afterwards, then fit the leather hard lids to the bowls. Also he learned that while the piece was still damp the decoration could best be applied to the rim-handle before the piece was dry.

As an art form, the ovenware was a challenge. In the fired clay itself there was already beauty. The form of the ovenware as designed by the potter is only one form of countless possibilities. Everything that is a tangible object is a form. The ovenware is a form and when it is touched, two different textures are felt; the texture of the glaze is smooth and the unglazed clay is a little rougher and would have a grainy, stony feeling. By feeling the pots it will be found that the walls are a certain

modulation of thickness, and this gives them a different proportion. The ovenware was left partially unglazed so there would be more interest to the pots.

In producing the ovenware as an art form, several things had to be considered. First, the ovenware was to be functional. Therefore, it must suit its surroundings and serve its purpose as a casserole. As in architecture and in pottery, once the function is decided upon, the form will follow. As the design developed, the bowl was made to be functional. It would hold food well, and there would be no sharp edges or inside corners where food would be hard to reach. The appearance of the ovenware pots must be pleasing to regard with the lids on or off and from all directions. The curving lines from the lip to the edge of the rim-handle contrast with the sharp angle of the lid handle and the foot. This breaks the monotony as the eye follows the lines of movement.

With the lids on or off, the ovenware still shows unity. With the lids on the pots the eye moves up and over the lid and down again. When the lids are off, the roundness of the lips provide another line for the eye to follow. If the lips were sharp, the unity would not be there and the eye movement would stop when it reaches the lips. The pots have uniformity, and the lines do not become repetitious.

The project proved very successful upon completion because the pottery ovenware is very serviceable. They are very harmonious with many types of silver, glass and other pottery serving pieces whenever and wherever they are utilized.

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APPENDIX

Figure 13. Finished ovenware.

Figure 14. Finished ovenware.

Figure 15. Finished ovenware.

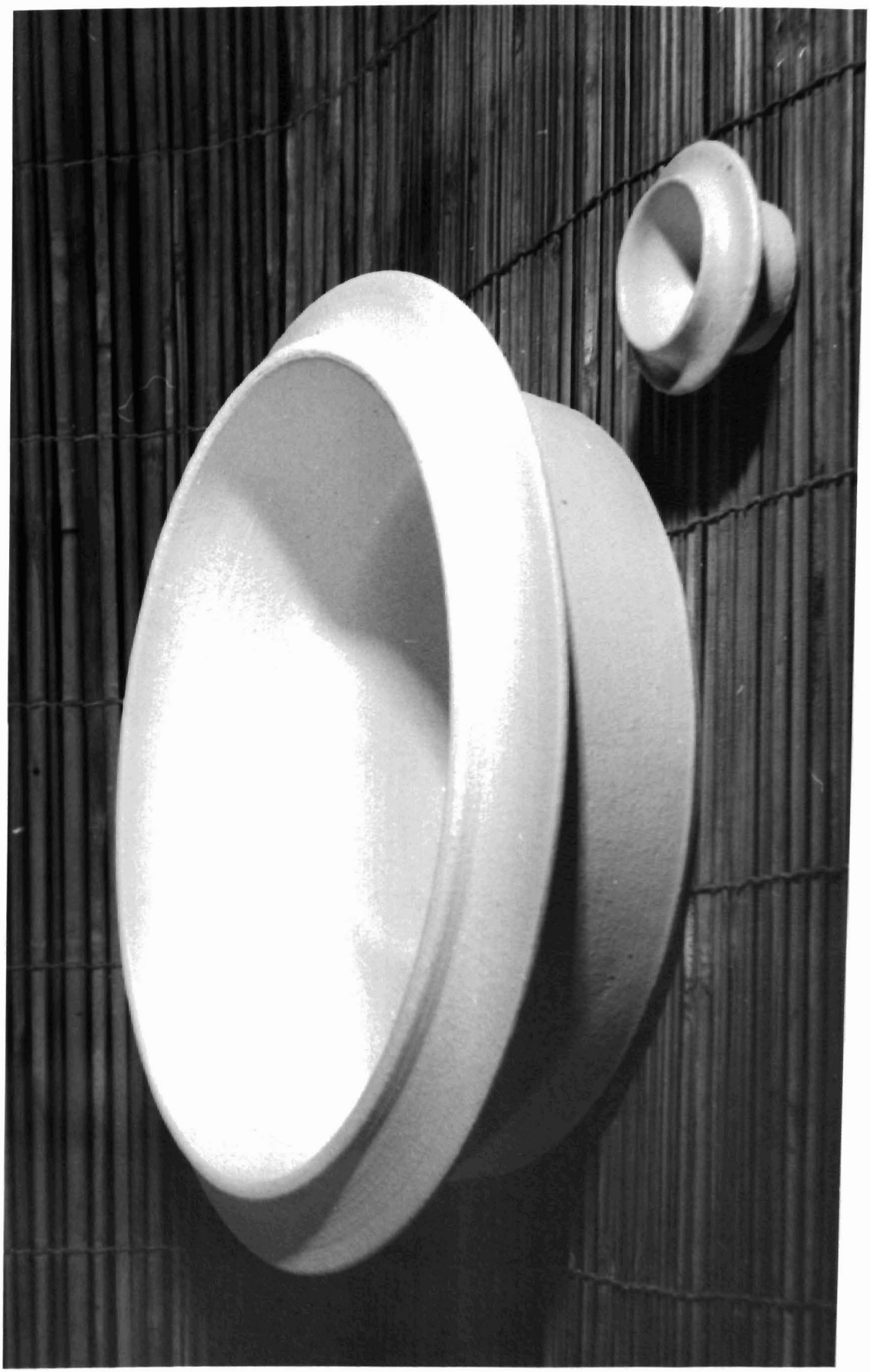

Figure 16. Finished ovenware.